

REMARKS

Claims 1, 6-8, 10 and 12 are pending. The support for the amendments to Claims 1 and 8 in the originally filed specification is on p.10, line 25. No new matter is added.

Claims 1, 6-8, and 10, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ota et al. (JP2000208471) in view of Laverdiere (US PG Pub 20050173003) further in view of Shirakashi (US PG Pub 20040206634) and Ito et al. (JP60048160). (Office Action, page 2)

The rejection relies on Ota as the primary reference, however Ota discloses “an addition amount control device 7 for controlling the amount of the acid or alkali to be added, based on the value measured by the electric conductivity measuring device 6.” This is a typical feedback control used to determine the amount of acid or alkali to add. In contrast the applicants are claiming, “a supply quantity of the supply liquid can be determined without performing feedback control.”

Ota et al. disclose a liquid supply apparatus using a typical feedback control method which determines a supply quantity of acid or alkali according to the measured value of an electric conductivity of ultra pure water in which the acid or alkali is added. This liquid supply method is completely different from the liquid supply method which determines a supply quantity of the supply liquid without performing feedback control.

Regarding this point, Ito et al. disclose a liquid supply method in which the pressure of one pipeline A of the two pipelines is kept at a constant value and the flow rate in the other pipeline B is kept at a constant value by regulating the revolving speed of a geared pump 8, so as to keep the discharge rate Q of the mixed liquid at a constant value. Accordingly, in the liquid supply method of Ito et al., the flow rates of the two liquids are always kept constant and the two liquids are always mixed at a constant ratio. Therefore, there is no disclosure of an idea to control a concentration of a mixed liquid that varies according to a flow rate of a supply solution.

Meanwhile, the claimed invention provides a liquid supply method which self-controls a concentration of an electrolytic aqueous solution to a constant value without performing feedback control even if a flow rate of ultra pure water varies. However, Ito et al. do not teach

or suggest a liquid supply method controlling a concentration of an electrolytic aqueous solution in ultra pure water without performing feedback control.

Even regarding this feature alone, the claimed invention is not obvious in light of the above references.

Furthermore, regarding the difference in a hollow fiber, the claimed hollow fiber not only reduces a pressure of an electrolytic aqueous solution that flows through the inside of the hollow fiber, but also discharges the electrolytic aqueous solution to ultra pure water, and also self-controls the pressure difference (P1-P2) according to the variation of the flow rate of ultra pure water, thereby enabling the concentration of the electrolytic aqueous solution to be kept constant. However, the Laverdiere reference and the Kumano et al. reference do not teach the self-control function of hollow fiber.

Thus the combination of Ota, Laverdiere, Shirakashi and Ito fail to disclose a system that can determine a quantity of supply without feedback control. There is absolutely no suggestion of such a system. Instead, the system suggested by the combination of cited art is the typical system based on feedback control and regulating pumps responsive to the feedback control.

Therefore, the invention now claimed is not, in fact, *prima facie* obvious in light of the above references. It is respectfully requested that the rejection be reconsidered and withdrawn.

Claims 1, 6-8, and 10, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ota et al. (JP2000208471) in view of Kumano et al. (US PG Pub 20060144777) further in view of Shirakashi (US PG Pub 20040206634) and Ito et al. (JP60048160). (Office Action, page 4)

In this rejection, Kumano is cited for “using hollow fibers for optimizing pressure in fluid flow.” However, again the rejection alleges the combination “to have provided the mixing device disclosed by Ota et al. with supply liquid a constant pressure as taught by Ito et al. in order to maintain desired mixing ratio”; however Ota requires feedback control and Ito requires specific pumps, thereby creating a teaching different that the claimed invention. In other words, Ota, Kumano, Shirakashi and Ito do not lead one to the invention now claimed, rather it would lead to the more complex feedback regulated systems of the prior art.

In other words, the combination of the cited art nowhere suggests a simple non-feedback

control system with hollow fiber tubes directly connected between a supply source and mixing point.

For the same reasons as cited above, the references relied upon do not make the invention as now claimed *prima facie* obvious.

In view of the above amendment, applicant believes the pending application is in condition for allowance. The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1105.

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Respectfully submitted,

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